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REMARKS

Claims 1-27 are currently pending in the subject application and are presently under consideration. A clean version of all pending claims is found at pages 2-7. Claim 27 has been amended herein to broaden the scope of thereof. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein.

**I. Rejection of Claims 1-27 Under 35 U.S.C. §103(a)**

Claims 1-27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Marshall *et al.* (U.S. Patent No. 5,685,398) in view of McCarthy (U.S. Patent No. 4,181,201). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Neither Marshall *et al.* nor McCarthy, alone or in combination, teach or suggest each and every claim limitation of the present application.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) *must teach or suggest all the claim limitations*. See MPEP §706.02(j). The *teaching or suggestion to make the claimed combination* and the reasonable expectation of success *must both be found in the prior art and not based on applicant's disclosure*. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added).

Independent claim 1 recites "...a manual brake release, comprising: a field cup adapted to support an electromagnetic coil; an *armature plate coupled to the field cup*; a stationary plate coupled to the armature plate; a friction disk disposed between the armature plate and the stationary plate; a compression spring disposed between the field cup and the armature plate, the compression spring being operable to hold the armature plate and the friction disk against the stationary plate; and a *lever and cam assembly coupled to the armature plate and the field cup*, the lever and cam assembly being operable to separate the armature plate from the friction disk." The claimed invention *directly* couples a rotary cam

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to a lever (See Figure 5). , which then *directly acts upon the armature plate and field cup to which it is coupled*. Turning the camshaft *directly* results in movement of the top portion of the lever toward the friction disk, which in turn forces the bottom portion of the lever to move in an opposite direction, away from the friction disk. Because the bottom portion of the lever is directly attached to the armature plate/field cup assembly, the armature plate and field cup are also pulled away from the friction disk, permit free rotation of the friction disk and the axis to which it is attached. This element of the present invention is advantageous in that it requires fewer moving parts than the McCarthy system while providing a high mechanical advantage in a compact space. Neither Marshall *et al.* nor McCarthy, alone or in combination, teaches or suggests such feature of applicants' claimed invention. Independent claims 11, 21, and 27 recite similar features to those of claim 1.

Marshall *et al.* teaches an *externally mounted lever*, which, when moved in either a forward or rearward direction, disengages an armature from a friction disc. The Marshall system fails to teach achieving a high mechanical advantage in a compact space. Furthermore, Marshall *et al.* *teaches away* from an element that provides high mechanical advantage in a compact space. As stated by the Examiner in the Office Action dated March 13, 2003, "[t]he handle of Marshall has a mechanical advantage due to its length. The *longer it is the more advantage it has*." The Examiner concedes that Marshall *et al.* fails to teach or suggest using a cam to actuate the lever device, and relies on McCarthy to teach using a cam to actuate a lever in order to disengage a motor brake.

However, McCarthy *et al.* necessarily *teaches away* from an element that requires increased length to achieve increased mechanical advantage. McCarthy is directed toward providing mechanical advantage in a compact space. See, e.g. column 5, lines 9-15 and column 6, lines 21-31, discussing the advantages of smaller and fewer parts associated with achieving mechanical advantage. Furthermore, McCarthy fails to teach or suggest *direct manual employment of a cam* to convert manual rotational motion into linear motion for releasing a brake as in applicants' claimed invention. Rather, McCarthy teaches employing a *cam-engaging latch arm 88 (not a cam 88 as suggested by the examiner)* to engage a cam portion 64 in order to effectuate release of the brake. Marshall *et al.* fails to overcome this deficiency of McCarthy *et al.*

Furthermore, the claimed invention advantageously converts rotational motion into

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linear motion to release a brake using fewer parts than the McCarthy invention. This feature of the present invention reduces energy loss due to friction. Furthermore, every time motion is translated from a linear to a rotational axis, or *vice versa*, energy is lost, resulting in a less efficient machine. Thus, the present invention is more efficient than the McCarthy system because it employs fewer translations of motion.

In view of the foregoing comments, it is respectfully submitted that the rejection of independent claims 1, 11, 21, and 27 (and claims 2-10, 12-20, and 22-26, which depend respectively therefrom) should be withdrawn.

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**II. Conclusion**

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number listed below.

Respectfully submitted,

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